IN THE CLAIMS:

1-14. (Canceled)

15. (Currently Amended) A method of writing servo frames to tracks of a storage medium using a write element of a head, each servo frame including a position field that is used to position a read element of the storage medium over the tracks and a logic field that provides a timing reference for the servo frame, the position field having at least a first portion and a second portion that is spaced laterally of the track from the first portion, the method comprising:

(A) positioning the write element over ~~substantially the whole of~~ a track on the storage medium;

(B) writing a complete full width logic field of a servo frame to said track with the write element;

(C) writing a first portion of the position field of said servo frame to a first part of said track with the write element;

(D) moving the write element relative to the storage medium such that a second portion of said position field of said servo frame of said track can be written at a position that is at least spaced laterally of the track from said first portion;

(E) during the movement in step (D), reading at least a portion of at least one of (i) said logic field of said servo frame of said track and (ii) a logic field of a servo frame of another track, in order to allow said portion of the logic field to be verified;

(F) writing said second portion of said position field of said servo frame of said track at a position that is at least spaced laterally of the track from said first portion with the write element; and,

(G) repeating steps (A) to (F) as required for subsequent tracks on the storage medium,

said position fields and said logic fields of said servo frames providing references for locating data sectors.

16. (Original) A method according to claim 15, wherein step (D) comprises moving the write element relative to the storage medium both laterally of the track and longitudinally of the track, and wherein the reading in step (E) takes place during said longitudinal movement.

17. (Original) A method according to claim 15, comprising repeating steps (B) and (C) as required for further servo frames of said track prior to carrying out step (D) and then repeating steps (D) to (F) as required for said further servo frames.

18. (Original) A method according to claim 15, comprising carrying out steps (A) to (G) for at least all tracks in a user data area of the storage medium.

19. (Original) A method according to claim 15, comprising reading a position field of a servo frame of another track whilst moving the write element in step (D).

20. (Original) A method according to claim 19, wherein the position field is demodulated to provide a position error signal that is used to control the movement of the head.

21. (Original) A method according to claim 19, wherein the position fields of at least all tracks in a user data area of the storage medium are read.

22. (Currently Amended) Apparatus for writing servo frames to tracks of a storage medium, each servo frame including a position field that is used to position a read element of the storage medium over the tracks and a logic field that provides a timing reference for the servo frame, the position field having at least a first portion and a second portion that is spaced laterally of the track from the first portion, the apparatus comprising:

a multi-element head having at least one write element and at least one read element that are offset from each other, the write element having a width that is greater than the pitch of the tracks on said storage medium;

the apparatus being arranged such that the write element can be positioned over ~~substantially the whole of~~ a track on the storage medium; such that a complete full width logic field of a servo frame can be written to said track with the write element; such that a first portion of the position field of said servo frame can be written to a first part of said track with the write element; such that the write element can be moved relative to the storage medium such that a second portion of said position field of said servo frame of said track can be written at a position that is at least spaced laterally of the track from said first portion; such

that, during the movement of the write element as aforesaid, a portion of at least one of (i) said logic field of said servo frame of said track and (ii) a logic field of a servo frame of another track can be read by the read element, in order to allow said portion of the logic field to be verified; and such that said second portion of said position field of said servo frame of said track can be written at a position that is at least spaced laterally of the track from said first portion with the write element, said position fields and said logic fields of said servo frames providing references for locating data sectors.

23. (Original) Apparatus according to claim 22, wherein the apparatus is arranged such that during said movement, the write element moves relative to the storage medium both laterally of the track and longitudinally of the track, and such that said reading of said logic field takes place during said longitudinal movement.

24. (Original) Apparatus according to claim 22, the apparatus being arranged such that a position field of a servo frame of a track is read during. the servo writing process.

25. (Original) Apparatus according to claim 24, the apparatus being arranged such that the position field is demodulated to provide a position error signal that is used to control the movement of the head.

26. (Original) Apparatus according to claim 24, the apparatus being arranged such that the position fields of at least all tracks in a user data area of the storage medium are read during the servo writing process.

27. (Previously Presented) A method of writing servo frames to tracks of a storage medium using a write element, each servo frame including a position field that is used to position a read element of the storage medium over the tracks, the method comprising:

(A) writing a first portion of a position field of a servo frame to a first part of a first track with the write element;

(B) moving the write element relative to the storage medium such that a second portion of said position field of said servo frame of said first track can be written at a position that is at least spaced laterally of the track from said first portion;

(C) during the movement in step (B), reading a position field of a servo frame of a second track;

(D) writing a second portion of said position field of said servo frame of said first track at a position that is at least spaced laterally of the track from said first portion with the write element; and

(E) repeating steps (A) to (D) as required for further tracks on the storage medium,

said position fields and said logic fields of said servo frames providing references for locating data sectors.

28. (Original) A method according to claim 27, wherein step (B) comprises moving the write element relative to the storage medium both laterally of the track and longitudinally of the track, and wherein the reading in step (C) takes place during said longitudinal movement.

29. (Original) A method according to claim 27, comprising repeating step (A) as required for further servo frames of said first track prior to carrying out step (B) and then repeating steps (B) to (D) as required for said further servo frames of said track.

30. (Original) A method according to claim 27, comprising carrying out steps (A) to (E) for at least all tracks in the a data area of the storage medium.

31. (Original) A method according to claim 27, wherein the position field is demodulated to provide a position error signal that is used to control the movement of the head.

32. (Previously Presented) Apparatus for writing servo frames to tracks of a storage medium, each servo frame including a position field that is used to position a read element of the storage medium over the tracks, the apparatus comprising:

a multi-element head having at least one write element and at least one read element that are offset from each other, the write element having a width that is greater than the pitch of the tracks on a said storage medium;

the apparatus being arranged such that a first portion of a position field of a servo frame is written to a first part of a first track with the write element; such that the write

element can be moved relative to the storage medium such that a second portion of said position field of said servo frame of said first track can be written at a position that is at least spaced laterally of the track from said first portion; such that during the movement as aforesaid, a position field of a servo frame of a second track is read using the read element; and such that a second portion of said position field of said servo frame of said first track is written with the write element at a position that is at least spaced laterally of the track from said first portion, said position fields and said logic fields of said servo frames providing references for locating data sectors.

33. (Original) Apparatus according to claim 32, wherein the apparatus is arranged such that during said movement, the write element moves relative to the storage medium both laterally of the track and longitudinally of the track, and wherein said reading of said logic field takes place during said longitudinal movement.

34. (Original) Apparatus according to claim 32, the apparatus being arranged such that the position field is demodulated to provide a position error signal that is used to control the movement of the head.

35. (Currently Amended) A method of verifying data areas of tracks of a storage medium using a write element and a read element, the method comprising:

(A) positioning the write element over ~~substantially the whole of~~ a track on the storage medium;

(B) writing a certification pattern to a data area of said track with the write element;

(C) repositioning the write element to be positioned at least partially over another track on the storage medium;

(D) while the write element is positioned at least partially over said another track on the storage medium, reading at least a portion of said certification pattern using the read element in order to allow the integrity of said data area to be checked; and

(E) repeating steps (A) to (D) as required for subsequent tracks on the storage medium.

36. (Original) A method according to claim 35, comprising repeating step (B) for plural data areas of said track prior to carrying out step (C), and in step (D) reading at least a

portion of the certification patterns written to said track in order to allow the integrity of said data areas to be checked.

37. (Currently Amended) Apparatus for verifying data areas of tracks of a storage medium, the apparatus comprising:

a write element and a read element that are offset from each other, the write element having a width that is greater than the pitch of the tracks on a said storage medium;

the apparatus being arranged such that the write element can be positioned over ~~substantially the whole of~~ a track on the storage medium; such that a certification pattern is written to a data area of said track with the write element; and such that the write element can be repositioned to be at least partially over another track on the storage medium and such that, while the write element is positioned at least partially over said another track on the storage medium, at least a portion of said certification pattern is read using the read element in order to allow the integrity of said data area to be checked.

38. (Previously Presented) A method of writing servo frames to and verifying data areas of tracks of a storage medium using a write element and a read element of a head, each servo frame including a position field that is used to position a read element of the storage medium over the tracks and a logic field that provides a timing reference for the servo frame, the method comprising:

(A) positioning the write element over substantially the whole of a track on the storage medium;

(B) writing a complete full width logic field of a servo frame to said track with the write element;

(C) writing a first portion of the position field of said servo frame to said track with the write element;

(D) writing a certification pattern to a data area of said track with the write element;

(E) moving the write element relative to the storage medium to a position over said track such that a second portion of said position field of said servo frame of said track can be written at a position that is at least spaced laterally of the track from said first portion;

(F) during the movement in step (E), reading a portion of at least one of (i) said logic field of said servo frame of said track and (ii) a logic field of a servo frame of another track, in order to allow said portion of the logic field to be verified;

(G) writing said second portion of said position field of said servo frame of said track at a position that is at least spaced laterally of the track from said first position with the write element;

(H) reading at least a portion of said certification pattern using the read element in order to allow the integrity of said data area to be checked; and

(I) repeating steps (A) to (H) as required for subsequent tracks on the storage medium, said position fields and said logic fields of said servo frames providing references for locating data sectors.

39. (Original) A method according to claim 38, wherein said previously written logic field is written in a first pass of the head over the storage medium and is read in a second pass of the head over the storage medium.

40. (Original) A method according to claim 39, wherein a first portion of said position field is written in said first pass of the head over the storage medium and a second portion of said position field is written in said second pass of the head over the storage medium.

41. (Original) A method according to claim 38, wherein at least a portion of the logic fields of the servo frames of all tracks in a user data area of the storage medium are read during the servo writing process to allow said portions to be verified.

42. (Original) A method according to claim 38, comprising reading a position field of a servo frame of a track during the servo writing process.

43. (Original) A method according to claim 42, wherein the position field is demodulated to provide a position error signal that is used to control the movement of the head.

44. (Original) A method according to claim 42, wherein the position fields of at least all tracks in a user data area of the storage medium are read during the servo writing process.

45. (Previously Presented) Apparatus for writing servo frames to and verifying data areas of tracks of a storage medium, each servo frame including a position field that is used to position a read element of the storage medium over the tracks and a logic field that provides a timing reference for the servo frame, the apparatus comprising:

a multi-element head having at least one write element and at least one read element that are offset from each other, the write element having a width that is greater than the pitch of the tracks on a said storage medium;

the apparatus being arranged such that the write element can be positioned over substantially the whole of a track on the storage medium; such that a complete full width logic field of a servo frame is written to said track with the write element; such that a first portion of the position field of said servo frame is written to said track with the write element; such that a certification pattern is written to a data area of said track with the write element; such that the write element can be moved relative to the storage medium to a position over said track such that a second portion of said position field of said servo frame of said track can be written at a position that is at least spaced laterally of the track from said first portion; such that during the movement as aforesaid, a portion of at least one of (i) said logic field of said servo frame of said track and (ii) a logic field of a servo frame of another track can be read by the read element, in order to allow said portion of the logic field to be verified; such that said second portion of said position field of said servo frame of said track is written at a position that is at least spaced laterally of the track from said first position with the write element; and such that at least a portion of said certification pattern is read using the read element in order to allow the integrity of said data area to be checked, said position fields and said logic fields of said servo frames providing references for locating data sectors.

46. (Original) Apparatus according to claim 45, the apparatus being arranged such that a position field of a servo frame of a track is read during the servo writing process.

47. (Original) Apparatus according to claim 46, the apparatus being arranged such that the position field is demodulated to provide a position error signal that is used to control the movement of the head.

48. (Previously Presented) Apparatus for writing servo frames to tracks of a storage medium, each servo frame including a position field that is used to position a read

element of the storage medium over the tracks and a logic field that provides a timing reference for the servo frame, the apparatus comprising:

a head having at least one write element and at least one read element, the write element having a width that is equal to or greater than the pitch of the tracks of a said storage medium, the read and write elements being offset from each other by an offset and being separated by a separation that allow the read element to read at least part of a previously written logic field of a servo frame of a track of the storage medium whilst the write element is moving towards the position where it writes at least a portion of a position field of a servo frame of another track of the storage medium, said position fields and said logic fields of said servo frames providing references for locating data sectors.

49. (Currently Amended) Apparatus according to claim 48, wherein the read element has a width that is ~~substantially~~ approximately equal to the pitch of the tracks of a said storage medium.

50. (Original) Apparatus according to claim 48, wherein the separation between the read and write elements is such that the read element can read the entire previously written logic field of a servo frame of a track of the storage medium whilst the write element is moving towards the position where it writes at least a portion of a position field of a servo frame of another track of the storage medium.

51. (Previously Presented) Apparatus for writing servo frames to tracks of a storage medium, each servo frame including a position field that is used to position a read element of the storage medium over the tracks, the apparatus comprising:

a head having at least one write element and at least one read element,

the read and write elements being offset from each other by an offset and being separated by a separation that allow the read element to read at least part of a previously written position field of a servo frame of a track of the storage medium whilst the write element is moving towards the position where it writes at least a portion of a position field of a servo frame of another track of the storage medium, said position fields and said logic fields of said servo frames providing references for locating data sectors.

52. (Previously Presented) A method of writing servo frames to tracks of a storage medium using a head having at least a write element, each servo frame including a position field that is used to position a read element of the storage medium over the tracks and a logic field that provides a timing reference for the servo frame, the method comprising:

interleaving the writing of the at least a portion of a position field of a servo frame to a track of a storage medium with reading of at least a portion of a previously written logic field of a servo frame of a track of the storage medium whereby said portion of the previously written logic field can be verified during the servo writing process, said position fields and said logic fields of said servo frames providing references for locating data sectors.

53. (Previously Presented) A method according to claim 52, wherein said previously written logic field is written in a first pass of the head over the storage medium and is read in a second pass of the head over the storage medium.

54. (Previously Presented) A method according to claim 53, wherein a first portion of said position field is written in said first pass of the head over the storage medium and a second portion of said position field is written in said second pass of the head over the storage medium.

55. (Previously Presented) A method according to claim 52, wherein at least a portion of the logic fields of the servo frames of all tracks in a user data area of the storage medium are read during the servo writing process to allow said portions to be verified.

56. (Previously Presented) A method according to claim 52, comprising reading a position field of a servo frame of a track during the servo writing process.

57. (Previously Presented) A method according to claim 56, wherein the position field is demodulated to provide a position error signal that is used to control the movement of the head.

58. (Previously Presented) A method according to claim 56, wherein the position fields of at least all tracks in a user data area of the storage medium are read during the servo writing process.

59. (Previously Presented) Apparatus for writing servo frames to tracks of a storage medium, each servo frame including a position field that is used to position a read element of the storage medium over the tracks and a logic field that provides a timing reference for the servo frame, the apparatus comprising:

a head having at least a write element and a read element that are offset from each other, the write element having a width that is greater than the pitch of the tracks on a said storage medium;

the apparatus being arranged such that the writing of at least a portion of the position fields of a servo frame to a track of a storage medium using the write element is interleaved with reading of at least a portion of a previously written logic field of a servo frame of a track of the storage medium using the read element whereby said portion of the previously written logic field can be verified during the servo writing process, said position fields and said logic fields of said servo frames providing references for locating data sectors.

60. (Previously Presented) Apparatus according to claim 59, the apparatus being arranged such that said previously written logic field is written in a first pass of the head over the storage medium and is read in a second pass of the head over the storage medium.

61. (Previously Presented) Apparatus according to claim 60, the apparatus being arranged such that a first portion of said position field is written in said first pass of the head over the storage medium and a second portion of said position field is written in said second pass of the head over the storage medium.

62. (Previously Presented) Apparatus according to claim 59, the apparatus being arranged such that at least a portion of the logic fields of the servo frames of all tracks in a user data area of the storage medium are read during the servo writing process to allow said portions to be verified.

63. (Previously Presented) Apparatus according to claim 59, the apparatus being arranged such that a position field of a servo frame of a track is read during the servo writing process.

64. (Previously Presented) Apparatus according to claim 63, the apparatus being arranged such that the position field is demodulated to provide a position error signal that is used to control the movement of the head.

65. (Previously Presented) Apparatus according to claim 63, the apparatus being arranged such that the position fields of at least all tracks in a user data area of the storage medium are read during the servo writing process.